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ABSTRACT

Hypotheses about person-environment congruency, consistency, and differentiation from Holland's theory of careers were tested. Subjects were 1,878 students from one college and one university who had been given the "Self-Directed Search" (SDS) before their freshman year followed by a satisfaction questionnaire at one or three years later. Two analyses were conducted. The first was a three-factor MANOVA with school, sex, and congruency level as the independent variables. The second was a four-factor MANOVA with school, sex, consistency, and differentiation as independent variables. Three college satisfaction measures were the dependent variables. Statistically significant main effects were found for school, sex, and congruency but not for consistency and differentiation. The results support Holland's congruency hypotheses but not the differentiation and consistency hypotheses. (Author)

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The Johns Hopkins University

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CONTRACT NO. NE-C-00-3-0115

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DEAN H. NAFZIGER, JOHN L. HOLLAND, AND GARY D. GOTTFREDSON

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three programs to achieve its objectives. The Schools and Maturity program is studying the effects of school, family, and peer group experiences on the development of attitudes consistent with psychosocial maturity. The objectives are to formulate, assess, and research important educational goals other than traditional academic achievement. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. The Careers and Curricula program bases its work upon a theory of career development. It has developed a self-administered vocational guidance device and a self-directed career program to promote vocational development and to foster satisfying curricular decisions for high school, college, and adult populations.

This report, prepared by the Careers and Curricula program, investigates student satisfaction with college by testing hypotheses from the theory of careers that the program is based on.

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Abstract

Hypotheses about person-environment congruency, consistency, and differentiation from Holland's theory of careers were tested. Subjects were 1878 students from one college and one university who had been given the Self-Directed Search (SDS) before their freshman year followed by a satisfaction questionnaire at one or three years later. Two analyses were conducted. The first was a three-factor MANOVA with school, sex and congruency level as the independent variables. The second was a four-factor MANOVA with school, sex, consistency, and differentiation as independent variables. Three college satisfaction measures were the dependent variables. Statistically significant main effects were found for school, sex, and congruency but not for consistency and differentiation. The results support Holland's congruency hypotheses but not the differentiation and consistency hypotheses.

Introduction

A clear knowledge of the student and college characteristics which lead to satisfaction and achievement is still needed in order to provide effective vocational and educational guidance to students. Many studies of student-college interaction have produced ambiguous and weak findings (Feldman & Newcomb, 1969; Walsh, 1973). In addition, such studies have laid bare numerous controversial methodological problems (Astin, 1970a, 1970b; Feldman, 1970).

The present study has the same goal as earlier ones--to learn what special student and college characteristics are conducive to student satisfaction--but the method differs. This study is guided by an explicit typology of persons and environments (Holland, 1973) rather than by a special statistical procedure. In theoretical terms, student satisfaction is the outcome of the congruency between a student's personality type and his college environment, and the consistency and differentiation of his personality pattern. A satisfied student would be expected to resemble the typical student at his college and to have a personality pattern which is both consistent and well-defined; a dissatisfied student would be expected to be less like a typical student and to have an inconsistent and poorly defined personality pattern. These hypotheses are elaborated elsewhere along with definitions of type, environment, consistency, and differentiation (Holland, 1973).

This study also differs from most earlier ones in its definition of environment. Several studies (Holland, 1968; Astin and Panos, 1969; Richards & Jones, 1970) used the total college as the environmental unit. This study, however, used the student's major field, for several reasons: (1) Major field is a more immediate environment composed of people and activities that a student is in daily contact with. In short, major field is a relatively

well-defined immediate subenvironment in the more diffuse total college environment. (2) Because students from many major fields were included in the sample, analysis at that level provided a broader range of environments. Data were available for only two colleges; thus analysis at the college level would have included a narrow range.

This study tested some of the hypotheses about person-environment interactions from Holland's (1973) theory, specifically: (1) Are college students in congruent college environments more satisfied than students in incongruent college environments? (2) Can the outcomes hypothesized for different degrees of person-environment congruency be distinguished from one another? (3) Are the differentiation and consistency of a student's personality profile related to college satisfaction?[1]

Method

Person-environment congruency was defined using Holland's theory of careers. Each person and each environment was classified as one of six types--R (Realistic), I (Investigative), A (Artistic), S (Social), E (Enterprising), and C (Conventional). The personality type of each subject was assessed using the Self-Directed Search (Holland, 1972). Each subject's immediate environment was assessed by coding his current major field (Holland, 1966). Three degrees of person-environment congruency were obtained using the hexagonal model (Figure 1) for interpreting interclass relations. The levels of congruency, ranging from lowest to highest, are as follows:

Level 1. Environmental one-letter code is neither hexagonally adjacent nor identical to the first letter of the person's SDS summary code (least congruent).

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[1] Ideally, the differentiation and consistency of the college environment also should have been studied to test all major hypotheses about interactions. This was not possible, because testing these additional hypotheses would require a large sample of colleges.

Level 2. Environmental one-letter code is hexagonally adjacent to the first letter of the person's summary code.

Level 3. Environmental one-letter code is identical to the first letter of the person's SDS summary code (most congruent).

Insert Figure 1 about here

Level 1 of congruency can be divided into two degrees of congruency--codes that are hexagonally opposite (such as I and E) and codes that are between opposite and adjacent (such as I and S). In this study, so few students were in grossly incongruent (opposite) environments that the two lowest levels were combined.

Consistency of a student's SDS summary code was also defined according to the hexagonal model by using the first two letters of the code: adjacent letters on the hexagon are most consistent, opposite letters are least consistent, and letters at intermediate distances are moderately inconsistent.

Differentiation of a student's personality profile (the degree to which he resembles one type only) was defined as the highest SDS summary scale score minus the lowest SDS summary scale score. The greater the difference, the more a person's profile would be differentiated. Subjects were classified into high or low differentiation categories by dividing all scores at the group median.

Two student assessments were used. The first, the Self-Directed Search (SDS), was administered to students during each college's freshmen orientation program. The SDS was used to classify students according to the Holland categories. The validity, reliability, and effects of the SDS have been reviewed elsewhere (Holland, 1972; Redmond, 1972; Zener & Schnuelle, 1972).

The second assessment, the Inventory of Educational Experience and Opinion (IEEO), included three scales measuring student satisfaction. Scale I had four items measuring satisfaction with college major. The scale was adapted from Hoppock's (1970) occupational satisfaction scale and revised to apply to college majors. Scale II measured students' perceived similarity to other students in their major field. It contained ten Likert-type items. Scale III measured students' satisfaction with their college or university. This scale contained seventeen Likert-type items; some items were adopted from Schmidt & Sedlacek's (1972) college satisfaction questionnaire.

The IEEO was pretested on 112 students from three universities. The split-half reliabilities, using the Spearman Brown correction for full length, from the pretests were: for Scale I, r = .87; for Scale II, r = .76; and for Scale III, r = .88. The reliability coefficients indicate that the scales have a useful degree of internal consistency. The scales were moderately correlated; Scale I correlated .60 with Scale II and .19 with Scale III. Scales II and III had a correlation of .31. Similar results were obtained for the entire sample of 1,878 students in this study. The split-half reliabilities corrected for full length were: for Scale I, r = .86; for Scale II, r = .81; and for Scale III, r = .89. For this large sample, Scale I and Scale II correlated .60, Scale I and Scale III correlated .33 and Scale II and Scale III correlated .42.

A large sample of college students from two schools was obtained. School A was a suburban, liberal arts college in an eastern metropolitan area. During the summer of 1972, the SDS was administered to 1,183 students in School A who were participating in a freshman and transfer orientation program.

Of that group, all those who were in school and could be located were mailed the IEEO in the spring of 1973. In addition to the initial questionnaire, two reminders were mailed to nonrespondents at intervals of 5 days and 2 weeks after the initial mailing. A total of 746 questionnaires were returned of which 601 were usable.

School B was a large state university with a diverse student body. In the fall of 1970, 2,508 students were given the SDS during freshman orientation. All of these students who were in school and could be located were mailed the IEEO in the spring of 1973. Reminders were mailed to nonrespondents as in School A. From these students, 1,487 questionnaires were returned, of which 1,277 were usable. Nonrespondents from the two schools included people who had dropped out of school, students whose addresses were not sufficient, and students who simply did not return the questionnaire. The number of people in each category cannot be determined, but most are probably in the last category.

In addition to school affiliation, students differed because their responses to the IEEO were obtained at different times in their college careers. The School A group was sampled at the end of the freshman year, about 10 months after their SDS scores had been obtained. The responses to the IEEO for School B students were obtained at the end of their junior year, almost three years after they had taken the SDS. Thus, this study is a strong test of the predictive ability of the Holland classification for a broad range of students.

In spite of the large sample that was obtained, the subjects were not distributed in such a way as to allow congruency, differentiation, and consistency to be analyzed in the same model and still block on school and sex factors. In addition, about 10% of the students could not be assigned to an

explicit congruency level because they had ties between the first two scores in their SDS profile. Thus, two different analyses were conducted. In the first, data were analyzed using a three-factor, fixed-effects MANOVA model. The factors were (a) school (2 levels), (b) sex (2 levels), and (c) person-environment congruency levels (3 levels). In the second analysis a four-factor, fixed effects MANOVA model was used. In addition to the blocking factors of school and sex, two levels of congruency and two levels of differentiation were used in the MANOVA. All students for whom data were complete were used in the second analysis.

Computations were done using the Miami MANOVA program (Clyde, Cramer, & Sherin, 1966) which uses a maximum likelihood test criterion for the multivariate F-ratio. To determine the relative contribution of each criterion scale toward the overall multivariate difference, standardized discriminant function coefficients were computed (Jones, 1966). In addition, the univariate F-ratios for each of the scales were calculated.

Results

The means for the three scales of the IEEO over the three factors of the first analysis are given in Table 1, and the associated MANOVA is given in Table 2. Significant multivariate F-ratios were obtained in all three of the

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Insert Tables 1 and 2 about here

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tests for main effects ($p < .05$); school, sex, and congruency level. For the school main effect, School A students indicated greater satisfaction than School B students. Standardized discriminant function coefficients indicated that Scales II (similarity to other students in major field) and III

(satisfaction with college) contributed about equally to the overall difference between the two sets of criteria. (See Table 3.) The univariate tests indicated that School A was higher than School B on each scale ($p < .05$).

Insert Table 3 about here

For the sex main effect, girls were found to have higher satisfaction scores than males. The discriminant function indicated that Scale II was almost solely responsible for the overall difference on this factor, and the separate ANOVA's revealed univariate differences on each of the individual scales and all in the same direction--girls indicating more satisfaction than boys.

The theoretically most important finding was that the differences among the congruency levels were as hypothesized. Students whose SDS codes were least like the Holland codes of their majors indicated the least satisfaction, and students in majors with Holland codes that matched their SDS codes indicated the greatest satisfaction. The standardized discriminant function in Table 3 indicates that Scales I and II were the primary contributors to the significant difference, with Scale I being considerably more important. Both scales measured the students' satisfaction with their major field. The measure of satisfaction with the entire college, Scale III, contributed little to the multivariate difference. None of the interaction effects was significant in this analysis. The univariate F-ratios were significant ($p < .05$) for Scales I and II only. In short, the differences in satisfaction among the three levels of congruency are specific to major field and do not seem to generalize to the entire college environment. Although differences among congruency levels were statistically significant and in the expected order, their magnitude was small.

The means for the two significant scales are graphed in Figure 2.

Insert Figure 2 about here

Individual comparisons were conducted on the congruency level means for Scales I and II using orthogonal contrasts (Games, 1971). Two contrasts were tested for each scale. The first compared the average of the two lowest levels of congruency with the highest level; this was essentially an either-or test of congruency. The second comparison, designed to determine if incongruency can be assessed in smaller units, tested the difference between Level 1 and Level 2. The results of the individual comparisons were the same for Scale I and Scale II. The first contrast, congruency versus incongruency, was significant ($p<.05$) and in the expected direction for each scale. However, the test for differences between the two lowest levels of incongruency was not significant.

The second analysis, testing the effect of consistency and differentiation in a student's satisfaction with his school and field, used a four-factor MANOVA with sex, school, consistency, and differentiation as independent variables. The means and MANOVA results are shown in Tables 4 and 5. As before the effects of sex and school were significant. However, the theoretically important tests among consistency and differentiation levels produced no significant differences.

Insert Tables 4 and 5 about here

Discussion

The results are limited in four ways: (1) The use of only two colleges obviated the testing of several hypotheses about the environment (consistency and differentiation of the environment and their effects on students). For these purposes, a large and diverse group of colleges is needed. (2) The sample was not large enough to test for differences among all possible levels of congruency and consistency. (3) The obtained effects are small, although they are statistically significant, and (4) the results are not generalizable to any well-defined population.

At the same time, the results have some merit. They support the hypothesis about person-environment interactions in the revised theory (Holland, 1973). In addition, the positive results were observed (predicted) for a long time interval ranging from ten months to three years. The results also suggest that congruency with one's subenvironment (major field) is a good predictor of satisfaction with that environment (students, professors, and activities in major field), but it does not predict satisfaction with the total college environment.

The positive result--student satisfaction is associated with congruency with major field--is somewhat consistent with older studies using both the either-or model of congruency and the older definitions of personality type (VPI). For example, Morrow (1971) found that congruence of type and field holds for mathematics majors but not for sociology majors. And, Williams' (1967) study of college roommates revealed that congruency leads to satisfaction between roommates and incongruency leads to conflict and separation. The evidence for and against the congruency hypothesis for other outcomes (satisfaction with college achievement, stability of choices, etc.) has been

reviewed by Holland (1973) and Walsh (1973). In general, these summaries appear to reiterate the main findings here; namely, hypotheses about congruency appear most tenable, and hypotheses about consistency and differentiation of personality types produce weaker and contradictory results.

Most important, the results are congruent with the main findings obtained in two closely related studies of the revised formulations. Helms and Williams (1973) tested all but one of the interaction hypotheses in their experimental study (two factor, repeated measures design). Their study required high school juniors to experience each of six work kits, simulating all environments, and report their reactions each time. The results for the degrees of congruency between students (personality type) and kits (environmental type) were unusually clear, statistically significant for both sexes, and closely parallel those for the present study. Because they were able to manipulate environments, Helms and Williams were able to provide a more definitive test of the degrees of congruency. Studies conducted in natural settings, such as the present one, cannot normally provide adequate tests of the level of congruency hypothesis, because most students and workers tend to self select environments which are at least somewhat congruent. In an earlier study, Williams (1973) found that a student's perceptions of the congruency between himself and an occupation (selected to represent one of the six types) failed to parallel the levels of congruency estimated from the hexagonal model. However, the highest level of congruency was correctly predicted (i.e., an R student found the R occupation most congruent) and was statistically significant in every instance for a sample of high school boys. The results for girls were not significant. Taken together these parallel studies of the same constructs lend strong support to the new formulation about congruency.

The differences between schools and sexes were not important with respect to Holland's theory, but the differences suggest that those factors have a large effect on college satisfaction. Women indicate more satisfaction than men on all three scales of the IEEO: the multivariate difference was attributable primarily to the scale measuring congruency with other students in major field. The difference between schools was in favor of the freshman from the small liberal arts college. Of course, the precise nature of the difference between schools is unclear because the students were in different years of college as well as in different schools.

The specific theoretical implications of the present study are mixed. On the one hand, the formulations for assessing congruency of person and environment receive support. On the other hand, the role of personal differentiation and consistency of personality type in interactions was not supported, and the role of differentiation and consistency of the environment was not tested for want of a large sample of colleges. The positive results for the main congruency hypothesis suggest that other outcomes--achievement and stability of vocational choice--may also be more predictable and interpretable via the revised theory. Only a new investigation with a large sample of colleges will make possible more definitive tests of the congruency hypotheses.

There are many potential practical applications. Counselors, using the SDS or the new form of the SVIB (Campbell, 1973), could estimate the degree of congruency for students considering specific major fields and give that information to students. In principle, the same procedure could be used to help people of any age consider the degree of congruency for any occupational possibility. Conversely, students or employed people seeking new alternatives could be evaluated for the degree of incongruency between themselves and their old job or field of study and the expected congruency of a new job or field of study.

References

Astin, A. W. The methodology of research on college impact, part one. Sociology of Education, 1970, 43, 223-254. (a)

Astin, A. W. The methodology of research on college impact, part two. Sociology of Education, 1970, 43, 437-450. (b)

Astin, A. W., and Panos, R. J. The educational and vocational development of American college students. Washington, D. C.: American Council on Education, 1969.

Campbell, D. P. The new Strong-Campbell Interest Inventory. Paper presented at the meeting of the Minnesota Statewide Testing Programs, Minneapolis, September 1973.

Clyde, D. J., Cramer, E. M., & Sherin, R. J. Multivariate statistical program. Coral Gables, Fla.: University of Miami Biometric Laboratory, 1966.

Feldman, K. A. Research strategies in studying college impact. Report No. 34, The American College Testing Program, Iowa City, Iowa, May, 1970.

Feldman, K. A. & Newcomb, T. M. The Impact of college on students. San Francisco: Jossey-Bass, 1969.

Games, D. A. Multiple comparison of means. American Educational Research Journal, 1971, 8, 531-565.

Helms, S. T. & Williams, G. D. An experimental study of the reaction of high school students to simulated jobs. Center Report No. 161, Center for Social Organization of Schools, Johns Hopkins University, Baltimore, 1973.

Holland, J. L. A psychological classification scheme for vocations and major fields. Journal of Counseling Psychology, 1966, 13, 278-288.

Holland, J. L. Explorations of a theory of vocational choice: VI, A longitudinal study using a sample of typical college students. Journal of Applied Psychology, 1968, 52, 1-37.

Holland, J. L. Professional manual for the Self-Directed Search. Palo Alto, Calif.: Consulting Psychologist's Press, 1972.

Holland, J. L. Making vocational choices: A Theory of careers. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

Hoppock, R. Manual for Job Satisfaction Blank No. 5. Robert Hoppock, 104 Webster Avenue, Manhasset, N. Y. 11030, 1970.

Jones, L. V. Analysis of variance and its multivariate developments. In R. B. Cattell (Ed.) Handbook of multivariate experimental psychology. Chicago: Rand McNally & Co., 1966.

Morrow, J. M. Jr. A test of Holland's theory. Journal of Counseling Psychology. 1971, 18, 422-425.

Morrow, J. M. Jr. A test of Holland's theory. Journal of Counseling Psychology, 1971, 18, 422-425.

Redmond, R. E. Increasing vocational information seeking behaviors of high school students. Doctoral dissertation, University of Maryland, College Park, 1972.

Richards, J. M. Jr., and Jones, P. K. Faculty and curriculum as measures of college environment. Journal of Educational Psychology, 1970, 61, 324-332.

Schmidt, D. K. & Sedlacek, W. E. Variables related to university students satisfaction. Journal of College Student Personnel, 1972, 13, 233-238.

Walsh, W. B. Theories of person-environment interaction: Implications for the college student. Iowa City, Iowa: American College Testing Program, 1973.

Williams, G. D. Student perceptions of occupational congruency. Report No. 156. Center for Social Organization of Schools, Johns Hopkins University, Baltimore, 1973.

Williams, J. E. Conflict between freshmen male roommates. Research Report No. 10-67. College Park, Md.: Counseling Center University of Maryland, 1967.

Zener, T. Baldwin and Schnuelle, L. An evaluation of the Self-Directed Search. Report No. 124, Center for Social Organization of Schools, Johns Hopkins University, February, 1972.

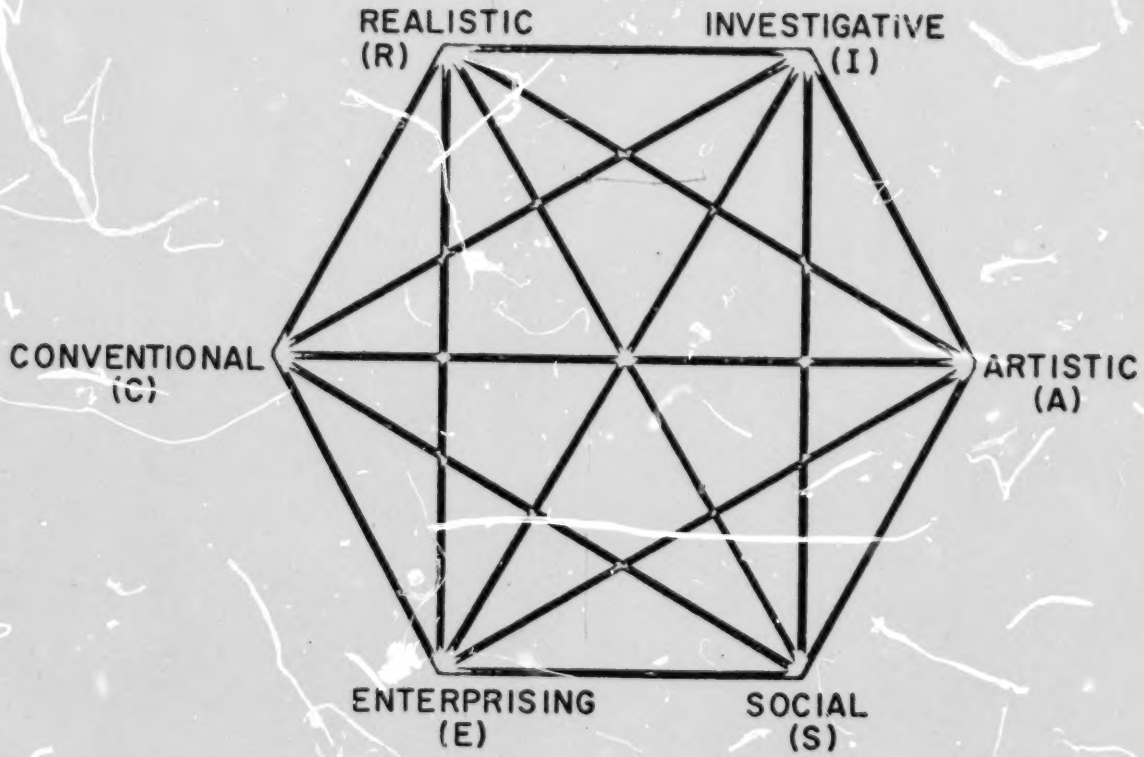

Fig. 1.- A Hexagonal Model for Defining the Psychological Relatedness among Occupational Groups and Personality Types

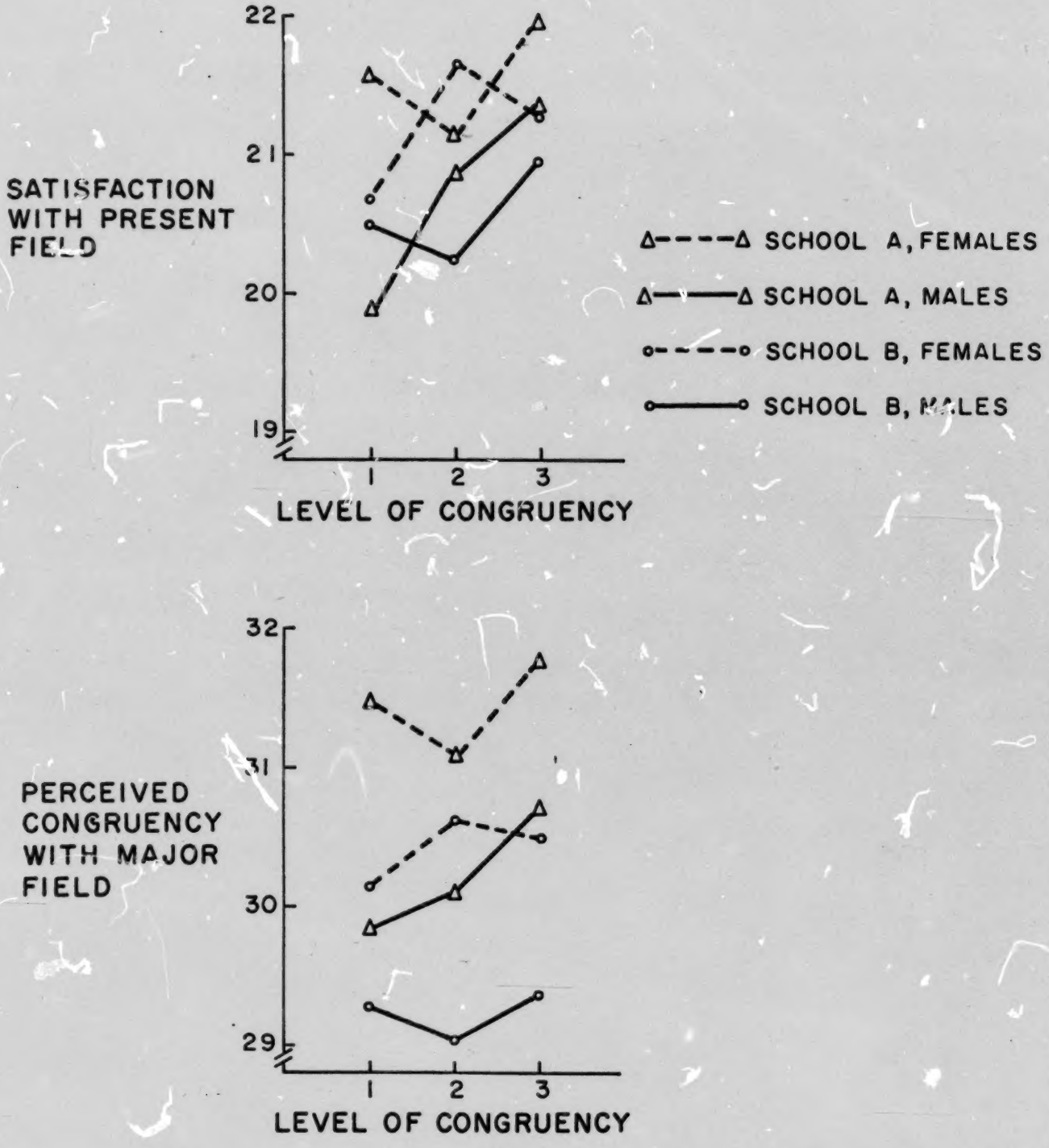

Fig. 2 - Mean Scores on Two IEEO Scales for School, Sex, and Congruency Level

Table 1

Means and Standard Deviations for the IEEO for

Sex, School, and Congruency Level

Congruency Level	Satisfaction with Present Field		Scale Perceived Congruency with Present Field		Satisfaction with College		Number of Students
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	
			School A Males				
1	19.91	3.18	29.81	2.73	46.29	6.96	42
2	20.89	3.19	30.04	2.80	45.69	6.92	45
3	21.39	3.12	30.70	3.18	46.89	5.88	79
			School A Females				
1	21.59	3.36	31.42	3.33	46.31	8.11	59
2	21.15	3.71	31.09	3.99	46.15	6.59	53
3	21.96	2.98	31.73	3.27	46.79	6.79	266
			School B Males				
1	20.52	3.78	29.27	3.87	43.93	5.69	174
2	20.22	3.53	29.02	3.56	43.29	6.64	174
3	20.87	3.66	29.39	3.18	43.08	6.96	288
			School B Females				
1	20.67	3.53	30.17	3.42	43.35	7.07	96
2	21.62	3.10	30.60	3.62	44.79	6.30	116
3	21.36	3.32	30.47	3.31	44.94	6.63	305

Table 2

Analyses of Variance for School, Sex, and Congruency Factors

	Multivariate		Univariate F - Ratios			
Source	df	F	df	Present Field	Congruency with Present Field	College
School (Sch)	3, 1683	30.769*	1, 1685	11.771*	63.679*	57.721*
Sex (S)	3, 1683	15.548*	1, 1685	15.593*	45.683*	7.296*
Congruency (C)	6, 3366	2.269*	2, 1685	6.150*	4.040*	< 1
Sch x S	3, 1683	1.066	1, 1685	< 1	< 1	2.476
Sch x C	6, 3366	< 1	2, 1685	< 1	< 1	< 1
S x C	6, 3366	1.173	2, 1685	1.035	< 1	2.126
Sch x S x C	6, 3366	1.174	2, 1685	2.776	< 1	< 1

* $p < .05$

Table 3

Standardized Discriminant Functions for Significant Factors

V_{School}	=	-.279 x Scale I + .771 x Scale II + .581 x Scale III
V_{Sex}	=	-.019 x Scale I + 1.005 x Scale II + .015 x Scale III
$V_{Congruency}$	=	.789 x Scale I + .335 x Scale II - .068 x Scale III

Table 4

Means and Standard Deviations for IEEO for Sex,

School, Consistency, and Differentiation

Differ-entiation	Consistency	Scale: Satisfaction with Present Field $\bar{X}$	SD	Perceived Congruency with Present Field $\bar{X}$	SD	Satisfaction with College $\bar{X}$	SD	Number of Students
				School A Males				
Low	Low	20.64	3.49	30.43	3.52	45.32	7.43	53
	High	20.90	3.05	30.40	3.19	46.96	6.41	80
High	Low	20.57	2.94	29.67	2.65	45.76	6.43	21
	High	21.16	3.21	29.90	2.79	46.58	5.92	38
				School A Females				
Low	Low	22.03	2.80	31.25	2.98	46.68	6.86	88
	High	21.63	3.16	31.37	3.43	46.49	7.36	124
High	Low	21.76	2.77	31.66	3.03	46.04	7.21	83
	High	21.82	3.62	32.02	3.80	47.01	6.63	114
				School B Males				
Low	Low	20.39	3.68	29.01	3.53	43.01	6.30	179
	High	20.42	3.57	29.44	3.52	43.25	6.82	219
High	Low	20.82	3.88	29.68	3.82	43.69	6.86	110
	High	20.80	3.55	29.38	3.34	43.61	6.08	201
				School B Females				
Low	Low	20.80	3.45	30.28	3.31	44.47	5.79	97
	High	21.11	3.33	30.44	3.52	44.22	6.87	187
High	Low	21.25	3.44	30.41	3.21	43.96	7.74	100
	High	21.59	3.36	30.53	3.38	45.26	6.32	184

Table 5

Analyses of Variance for School, Sex, Consistency, and Differentiation Factors

	Multivariate		Univariate F - Ratios			
Source	df	F	df	Present Field	Congruency with Present Field	College
School (Sch)	3, 1860	30.444*	1, 1862	13.394*	60.775*	62.008*
Sex (S)	3, 1860	17.136*	1, 1862	20.930*	51.276*	8.319*
Consistency (C)	3, 1860	< 1	1, 1862	< 1	1.300	2.336
Differentiation (D)	3, 1860	1.310	1, 1862	3.777	1.474	< 1
Sch x S	3, 1860	1.307	1, 1862	< 1	< 1	1.710
Sch x C	3, 1860	< 1	1, 1862	< 1	< 1	< 1
Sch x D	3, 1860	< 1	1, 1862	1.221	< 1	< 1
S x C	3, 1860	< 1	1, 1862	< 1	< 1	< 1
S x D	3, 1860	< 1	1, 1862	< 1	< 1	< 1
C x D	3, 1860	< 1	1, 1862	< 1	< 1	< 1
Sch x S x C	3, 1860	1.404	1, 1862	1.432	< 1	1.092
Sch x S x D	3, 1860	1.841	1, 1862	< 1	2.902	< 1
Sch x C x D	3, 1860	< 1	1, 1862	< 1	< 1	< 1
S x C x D	3, 1860	< 1	1, 1862	< 1	< 1	2.044
Sch x S x C x D	3, 1860	< 1	1, 1862	< 1	< 1	< 1

* $p < .05$